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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/560,701	BINSTEAD, RONALD P.	
	Examiner	Art Unit	
	VINH LAM	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-45* is/are pending in the application.

5a) Of the above claim(s) *2,3 and 15* is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,4-14,&16-45* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *30 January 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/20/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims **1**, **4-14**, **20**, **28-41**, and **45** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Le-Pailleur (US PGPub. 2003/0112226)** and further in view of **Tanaka et al. (US PGPub. 2004/0017364).**

Regarding Claim **1**, (Currently Amended) **Yoshikawa et al.** teach a capacitive *([**0051**], FIG. **1**, i.e. capacitive coupling)* touchpad *([**0051**], FIG. **1**, i.e. digitizing tablet **1**)* comprising a plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. column electrodes **6** and row electrodes **7**)* located across [a] (parallel) plane(s) of a supporting medium *([**0051**], FIG. **1**, i.e. upper and lower planes of insulating sheet **8**)*, said plurality of spaced apart conductors comprising a first series of conductors extending in a first direction on a first plane *([**0051**], FIG. **1**, i.e. column electrodes **6**)* and a second series of conductors extending in a second, different, direction on a

second plane, said second plane being substantially parallel to said first plane, *([**0051**], FIG. **1**, i.e. row electrodes **7**)*, wherein said supporting medium *([**0051**], FIG. **1**, i.e. insulating sheet **8**)* supports said plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. column electrodes **6** and row electrodes **7**)* wherein there is no electrical contact between said plurality of spaced apart conductors *([**0051**], FIG. **1**)*, each of said spaced apart conductors being sensitive to a proximity *([**0056**], FIG. **1**, i.e. electrodes **7** to couple)* of a finger *([**0056**], FIG. **1**, i.e. stylus pen **9**; or [**0024**], i.e. **finger**)* to modify a capacitance of said spaced apart conductor *([**0056**], FIG. **1**, i.e. **capacitive dielectric**)* to detect the presence of the finger positioned close to said spaced apart conductor *([**0056**], FIG. **1**, i.e. stylus pen **9** … near …electrodes **7** to couple).*

However, **Yoshikawa et al.** do not teach an electrically conductive medium location and its function.

In the same field of endeavor, **Le-Pailleur** teaches

an electrically conductive medium *([**0031**], FIG. **1**, i.e. conducting parts **3**)* located in a plane *([**0031**], FIG. **1**, i.e. obviously formed by conducting parts **3**)* that is substantially parallel to the plane of the supporting medium *([**0031**], FIG. **1**, i.e. surface **2** and/or medium between electrodes **E1-E2, E1'-E2,'** and conducting parts **3**),*

said electrically conductive medium being proximal to said plurality of spaced apart conductors *([**0031**], [**0032**], FIG. **1**, i.e. electrodes **E1-E2** and **E1'-E2')* to concentrate an electric field between said plurality of spaced apart conductors towards the plane of said supporting medium *([**0031**], [**0032**], FIG. **1**, i.e. obviously due to additional capacitance (C=q/V) from user's finger, the charge (q) between the*

electrodes would increase since the voltage of the system remains constant. Consequently, therefore, concentration of electric field exists at the touch area) and adapted to locally modify a capacitive environment between a subset of said plurality of spaced apart conductors *([**0033**], FIG. **1**, i.e. obviously that the capacitance would be altered in the present of finger 10 so that location detection would be determined)* without distortion of said conductive medium *([**0031**], FIG. **1**, i.e. obviously metal characteristic of conducting parts **3**)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of a touchpad having conductors supported by a medium with **Le-Pailleur** teaching of an electrically conductive medium location and its function *to accurately detect user (e.g. finger) input.*

However, **Yoshikawa et al.** and **Le-Pailleur** do not teach that the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

In the same field of endeavor, **Tanaka et al.** teach that the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square *([**0320**])*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Le-Pailleur** teaching of a touchpad having conductors supported by a medium and an electrically conductive medium location and its function with **Tanaka et al.** teaching of the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square *to*

improve accuracy of a pointing object detection and to reduce cost of design, engineering, parts, and manufacturing processes.

Regarding Claim **4**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Le-Pailleur** teaches said electrically conductive medium is adapted to accentuate the variation in capacitance of a conductor and to control the dispersion of a resulting capacitive signal propagating from substantially the proximity of the finger *([**0031**], [**0032**], FIG. **1**, i.e. obviously resulted in "a high interaction capacitance")*.

Regarding Claim **5**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said supporting medium is electrically insulating *([**0051**], FIG. **1**, i.e. insulating sheet **8**).*

Regarding Claim **6**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Le-Pailleur** teaches said conductive medium is in the form of a conductive layer covering at least a portion of said supporting medium *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **7**, (Previously Presented) the touchpad as claimed in claim 6, wherein **Le-Pailleur** teaches said conductive layer is discontinuous *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **8**, (Previously Presented) the touchpad as claimed in claim 6, wherein **Le-Pailleur** teaches said conductive layer is selectively supported by a first surface of said supporting medium *([**0031**], [**0032**], FIG. **1**)* or a first surface of a dielectric medium.

Regarding Claim **9**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Le-Pailleur** teaches said dielectric medium has a thickness which is relatively large as compared to the thickness of said conductive layer *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **10**, (Previously Presented) the touchpad as claimed in claim 6, **Le-Pailleur** teaches further comprising a non-conductive layer proximate to said conductive layer, wherein said non-conductive layer is configured to prevent direct user contact with the conductive layer *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **11**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Le-Pailleur** teaches said supporting medium and said conductive layer are separated by said dielectric medium *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **12**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Le-Pailleur** teaches said conductive layer is sandwiched between said supporting medium and said dielectric medium *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **13**, (Previously Presented) the touchpad as claimed in claim 8, wherein **Le-Pailleur** teaches said supporting medium is sandwiched between said conductive layer and said dielectric medium *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **14**, (Previously Presented) the touchpad as claimed in claim 8, **Le-Pailleur** teaches comprising a further conductive layer proximate to said dielectric medium and sandwiching said dielectric medium between said further conductive layer and said conductive layer *([**0031**], [**0032**], FIG. **1**)*.

Regarding Claim **20**, (Previously Presented) the touchpad as claimed in claim 14, wherein **Le-Pailleur** teaches said further conductive layer is supported by a second surface of said dielectric medium, said second surface being in substantially opposed relation to said first surface of said dielectric medium *([**0031**], [**0032**], FIG. **1**).*

Regarding Claim **28**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Tanaka et al.** teach said supporting medium and said conductive medium are formed as a single conductive support and sensing layer *([**0318**]).*

Regarding Claim **29**, (Currently Amended) the touchpad as claimed in claim 28, wherein **Tanaka et al.** teach said single conductive support and sensing layer is formed from a bulk doped medium having a bulk conductivity *([**0318**]).*

Regarding Claim **30**, (Currently Amended) the touchpad as claimed in claim 29, wherein **Tanaka et al.** teach said bulk doped medium is glass or plastic comprising a dopant of conductive material *([**0340**]).*

Regarding Claim **31**, (Currently Amended) the touchpad as claimed in claim 30, wherein **Tanaka et al.** teach said conductive material is selectively particulate or fibrous *([**0321**]).*

Regarding Claim **32**, (Currently Amended) the touchpad as claimed in claim 31, wherein said particulates may be selectively formed from metal or metal oxides with a size up to 10 microns wide is an obvious *Choice of Design.*

Regarding Claim **33**, (Currently Amended) the touchpad as claimed in claim 31, wherein said the fibrous material may be selectively formed from nanotubes or carbon fibers with a length up to 10 millimeters is an obvious *Choice of Design.*

Regarding Claim **34**, (Currently Amended) the touchpad as claimed in claim 28, wherein **Tanaka et al.** teach said plurality of conductors are substantially contained within said single conductive support and sensing layer *([**0318**])*.

Regarding Claim **35**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said plurality of conductors are each electrically insulated *([**0051**], FIG. **1**, i.e. column electrodes **6** and row electrodes **7**).*

Regarding Claim **36**, (Previously Presented) the touchpad as claimed in claim 35, wherein **Tanaka et al.** teach each conductor of said plurality of conductors is coated with an electrically insulating sheath (**[0006]**).

Regarding Claim **37**, (Previously Presented) the touchpad as claimed in claim 28, wherein said conductive support and sensing layer has a textured surface in the form of surface distortions for the redirection of a point of touch which is an obvious *Choice of Design.*

Regarding Claim **39**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said touchpad is resilient *([**0054**], Fig. **1**).*

Regarding Claim **40**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said touchpad is deformable *([**0054**], Fig. **1**).*

Regarding Claim **41**, (Previously Presented) the touchpad as claimed in claim 1, wherein **Tanaka et al.** teach said conducting medium is selectively Indium Tin Oxide (ITO) or Antimony Tin Oxide (ATO) *(Col. **30**, [**0340**]).*

Regarding Claim **45**, (Currently Amended) the touchpad as claimed in claim 1, wherein **Yoshikawa et al.** teach said plurality of conductors comprises said first

series of spaced-apart conductors and said second series of spaced apart conductors disposed in intersecting relation *([0051], FIG. **1**, i.e. column electrodes **6** and row electrodes **7**)*.

2. Claims **16**-**19**, **21**-**27**, and **38** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Le-Pailleur (US PGPub. 2003/0112226)** in view of **Tanaka et al. (US PGPub. 2004/0017364)** and further in view of **Vranish (US PGPub. 2002/0000977).**

Regarding Claim **16**, (Previously Presented) **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teach the touchpad as claimed in Claim 1.

However, **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** do not teach the conductive medium electrically floats or is grounded to earth.

In the same field of endeavor, **Vranish** teaches said conductive medium electrically floats or is grounded to earth *([0031], Fig. **3**)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of the conductive medium electrically floats or is grounded to earth to reduce background noise and electromagnetic interference.

Regarding Claim **17**, (Previously Presented) **Vranish** teaches the touchpad as claimed in claim 16, wherein said conductive medium is selectively grounded by a wire or a resistor *([0031], Fig. 3)*.

Regarding Claim **18**, (Previously Presented) **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teach the touchpad as claimed in claim 6.

However, **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** do not teach the conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium.

In the same field of endeavor, **Vranish** teaches a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium *([0031], Figs. 2 & 3)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching the conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium *to apply the technology not only to a touchpad but also to a keypad.*

Regarding Claim **19**, (Previously Presented) the touchpad as claimed in claim 18, wherein **Vranish** teaches the separations between said conductive regions are relatively small compared to the width of said conductive regions, so as to

selectively allow capacitive coupling of adjacent regions via said supporting medium or said dielectric medium *([**0031**], Figs. **2** & **3**).*

Regarding Claim **21**, (Previously Presented) **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teach the touchpad as claimed in claim 20.

However, **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** do not teach wherein said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium.

In the same field of endeavor, **Vranish** teaches wherein said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium *([**0031**], Figs. **2** & **3**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium *to correspondingly adapt to the keypad design*.

Regarding Claim **22**, (Previously Presented) the touchpad as claimed in claim 21, wherein **Vranish** teaches said conductive regions on said first surface of said dielectric medium and said conductive regions on said second surface of said dielectric medium are registered to each other by virtue of corresponding substantially coterminous areas *([**0031**], Figs. **2** & **3**).*

Regarding Claim **23**, (Previously Presented) the touchpad as claimed in claim 21, wherein said conductive regions on said first surface of said dielectric medium and said conductive regions on said second surface of said dielectric medium are registered to each other by virtue of corresponding overlapping non-coterminous areas which is an obvious *Choice of Design* disclosed by applicant's disclosure *([**0094**], [**0095**])*.

Regarding Claim **24**, (Previously Presented) the touchpad as claimed in claim 22, wherein **Vranish** teaches said registered regions are capacitively coupled via said dielectric medium *([**0045**], Table **1**)*.

Regarding Claim **25**, (Previously Presented) the touchpad as claimed in claim 18, wherein **Vranish** teaches said conductive regions are substantially rectangular *(Fig. **2**)*.

Regarding Claim **26**, (Previously Presented) **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teach the touchpad as claimed in claim 8.

However, **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** do not teach said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions.

In the same field of endeavor, **Vranish** teaches said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions *([**0047**], Fig. **6**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions *to adjust the resistivity to a desired specification.*

Regarding Claim **27**, (Previously Presented) the touchpad as claimed in claim 26, wherein **Vranish** teaches said conductive regions have a relatively large thickness and said conductive bridges have a relatively small thickness to increase the resistance in said conductive layer *([**0047**], Fig. **6**).*

Regarding Claim **38**, (Previously Presented) **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teach the touchpad as claimed in claim 1.

However, **Yoshikawa et al.** and **Tanaka et al.** do not teach said touchpad is arranged into a non-planar configuration.

In the same field of endeavor, **Vranish** teaches said touchpad is arranged into a non-planar configuration (Fig. **4**).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teaching of touchpad structures with **Vranish** teaching of said touchpad is arranged into a non-planar configuration *to apply the technology not only to a touchpad but also to other input devices*.

3. Claims **42** and **44** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Le-Pailleur (US PGPub. 2003/0112226)** in view of **Tanaka et al. (US PGPub. 2004/0017364)** and further in view of **Lin et al. (US Patent No. 6954868).**

Regarding Claim **42**, (Previously Presented) **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teach a touchpad system including a touchpad as claimed in claim 1.

However, **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** do not teach a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein

in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position.

In the same field of endeavor, **Lin et al.** teach a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position *(Col. **8**, Ln. **1-28**, Fig. **4**)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Le-Pailleur**, and **Tanaka et al.** teaching of touchpad structures with **Lin et al.** teaching of a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position *to reduce the power consumption utilizing sleep and wake up states*.

Regarding Claim **44**, (Previously Presented) the touchpad system as claimed in claim 42, wherein the power consumption of said sensing circuit is less than about 10 microamps when sleeping is an obvious Choice of Design.

4. Claim **43** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Le-Pailleur (US PGPub. 2003/0112226)** in view of **Tanaka et al. (US PGPub. 2004/0017364)** in view of **Lin et**

al. (US Patent No. 6954868) in view of **Lin et al. (US Patent No. 6954868)** and further in view of **Files et al. (US Patent No. 5657053).**

Regarding Claim **43**, (Original) **Yoshikawa et al.**, **Le-Pailleur**, **Tanaka et al.**, and **Lin et al.** teach the touchpad system as claimed in claim 42.

However, **Yoshikawa et al.**, **Tanaka et al.**, and **Lin et al.** do not teach the touch is detected in less than about 3 microseconds.

In the same field of endeavor, **Files et al.** teach the touch is detected in less than about 3 microseconds.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.**, **Tanaka et al.**, and **Lin et al.** teaching of touchpad structures, detection circuit for sleeping and awaking modes with **Files et al.** teaching of the touch is detected in less than about 3 microseconds *in order to benefit of quickly responding and deactivating when touch being detected.*

Response to Arguments/Amendments/Remarks

5. Claim(s) **2-3 15** and are canceled.

6. Applicant's arguments, see P. 8, filed 07/29/2011, with respect to 35 U.S.C. §112 1st and 2nd ¶ Rejections have been fully considered and are persuasive. The Rejections of 35 U.S.C. §112 1st and 2nd ¶ has been withdrawn.

7. Applicant's arguments filed 07/29/2011 have been fully considered but they are not persuasive.

First of all on P. 9-10, applicant argues that **Le-Pailleur** device *"is not a capacitive touchpad"* and, therefore, *"no motivation to combine"*. However, the Examiner respectfully disagrees because:

a. **Le-Pailleur** device ***is not a capacitive touchpad*** because of the following reasons:

(i) In contrary to the above statement, the ***applicant explicitly admits*** that "...the ***capacitive interaction between two electrodes*** that are in the same plane...." (P. 10, 3rd Paragraph, Lines 1-2)

(ii) The device is ***not a resistive touchpad*** because there's no disclosure of plurality of resistances in a grid-like construction so that when the user's finger is in contact, connection is established thereby location is determined due the different and unique resistive value at the point of contact. There's ***no need for using frequency*** as disclosed in **Le-Pailleur** specification ***[0033]***.

(iii) The device is clearly ***not a pressure-sensitive touchpad*** because there's ***no need for using frequency*** as disclosed in **Le-Pailleur** specification ***[0033]***.

(iv) The device is obviously ***not an infrared, ultrasonic, optical, or electromagnetic touchpad*** because the ***frequency*** would be transmitted from a transmitter, which is located within an input device (e.g. stylus or pointing means), to a receiver as the input device touchdown on the touchpad. **Le-Pailleur** specification

[0031] and FIG. 1 explicitly discloses that "external element ***10 is a finger*** of a user", therefore, ***would not*** generate any ***frequency*** as it contacts to the surface.

(v) Most importantly, **Le-Pailleur** device unquestionably ***is a capacitive touchpad*** because the ***frequency*** is utilized in conjunction with the ***capacitance***, namely user's finger, to accurately and positively identify and verify user's finger and location as it is well-known in the art (Kent et al. (US Patent 6297811, Col. 6, Ln. 30-62, FIG. 7)) by a person having ordinary skilled. The frequency/capacitance relationship is also well taught in Physics and Engineering courses. (Please note that the Examiner cites the above references to assist applicant in understanding the intrinsic and/or inherent characteristics of **Le-Pailleur capacitive touchpad**; *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977)).

Since the applicant's assumption that **Le-Pailleur** device *"is not a capacitive touchpad"* is simply incorrect and explicitly admitted capacitive interaction on the surface of the device, therefore, the combination of reference is certainly valid.

b. ***Motivation to combine*** Le-Pailleur with those of Tanaka and Yoshikawa

(i) The motivation to combine **Yoshikawa et al.** and **Le-Pailleur** is implicitly suggested by **Le-Pailleur** ***[0005] & [0006]*** *as to correctly and accurately enhance the user input (i.e. finger identification).*

(ii) In response to applicant's argument that *"...to improve the accuracy and speed of touch detection of the system, for example, which is an objective of the present invention..."*, the fact that applicant has recognized another advantage which

would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

(iii) The motivation to combine **Yoshikawa et al.** and **Le-Pailleur** with **Tanaka et al.** is obviously a Choice of Design to exploit of the fact that the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square is readily available "of-the-shelve" which basically would fit any size, shape, design constraints, and manufacturing processes therefore, ultimately reducing the cost of the device.

c. **Le-Pailleur's** *conducting parts 3* do not ""concentrate an electric field between said plurality of spaced apart conductors towards the plane of said supporting medium", nor is it "adapted to locally modify a capacitive environment between a subset of said plurality of spaced apart conductors"". However, the Examiner respectfully disagrees because **Le-Pailleur** ***[0005] & [0006]*** explicitly disclose that there are definitely capacitive interactions between electrodes and conducting parts 3. As the user's finger contacts the surface, it would obviously concentrate an electric field point which is a result of the finger's capacitance adapts to locally modify a capacitive environment surrounding the touchdown. Please see above rejection and analysis for detail.

c. **Le-Pailleur** does not "...include a first and second series of conductors, whereby the second series of conductors are in a different plane to the first series of

conductors…". The Examiner agrees because it is **Yoshikawa et al.** who teach the above limitation.

d. **Le-Pailleur** does not "…have a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square….". The Examiner agrees because it is **Tanaka et al.** who teach the above limitation.

In response to applicant's arguments (items **c** and **d**) against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

e. Dependent claims are properly rejected as shown above.

Conclusion

The prior art(s) made of record and not relied upon (is)/are considered pertinent to applicant's disclosure: Shimizu; Toshiyuki (US Patent/PGPub. No. 6628269).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH T. LAM whose telephone number is (571)270-3704. The examiner can normally be reached on M-F (7:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Vinh T Lam/
Examiner, Art Unit 2629

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629